WHAT IS CLAIMED IS:

1. A ceramic sheet having a burr height on the periphery of the sheet of ±100 μm or less, and/or having a dimple height on the surface of the sheet of 100 μm or less, said burr height and said dimple height being determined by irradiating the sheet with a laser beam to measure reflected light, and three-dimensionally analyzing said reflected light with a laser optical three-dimensional profiling instrument.

2. A ceramic sheet according to claim 1, further having an waviness height on the surface of the sheet of 100 μm or less.

3. A ceramic sheet according to claim 1, comprising a zirconia ceramic.

4. A ceramic sheet according to claim 1, wherein said ceramic sheet comprising a zirconia ceramic, said zirconia ceramic being partially stabilized with 2.8 to 4.5% by mole of yttria and comprising 0.1 to 2% by mass of at least one dispersed reinforcing oxide, wherein the grain size on the surface of said sheet has an average of 0.1 to 0.4 μm, a maximum of 0.4 to 0.8 μm, and a coefficient of variation of 30% or less, said grain size being determined by scanning electron

microscopic observation of the surface of the sheet.

5. A ceramic sheet according to claim 4, wherein said dispersed reinforcing oxide comprises at least one selected from the group consisting of oxides of Group 4A elements, Group 5A elements, Group 3B elements, and Group 4B elements, and wherein said sheet has a content of silica of 0.1% by mass or less and a total content of alkali metal oxides of 0.1% by mass or less.

6. A ceramic sheet according to claim 1, which is a thin film sheet having a thickness of 10 to 500 μm.

7. A ceramic sheet according to claim 1, which is for use in a planar solid oxide fuel cell.

8. A process for producing a ceramic sheet comprising a punching step of punching a ceramic green sheet in a direction substantially perpendicular to the surface of said sheet, and a baking step of baking said punched sheet, wherein a punching blade which satisfies the following mathematical expression is used and said punching blade travels with a face to be punched being pressed by an elastic polymer member in said punching step:

$20° \leq \theta = \theta_1 + \theta_2 \leq 70°$ and $\theta_1 \leq \theta_2$

wherein θ is an angle of blade, θ_1 is an angle defined by an edge surface of the blade opposing a product sheet and a center line (X) passing a tip end of the blade in parallel to the traveling direction of the blade, and θ_2 is an angle defined by an edge surface of the blade opposing a residual sheet and the center line (X).

9. A process according to claim 8, further comprising the ceramic green sheet molding step, wherein a slurry is molded into the ceramic green sheet, said slurry comprising 2.8 to 4.5% by mole in terms of solid content of yttria and 0.1 to 2% by mass of at least one dispersed reinforcing oxide, and the solid component of said slurry having an average particle diameter (50% by volume diameter) of 0.05 to 0.5 μm, a 90% by volume diameter of 0.5 to 2 μm, and a critical diameter (100% by volume diameter) of 3 μm or less.

10. A process according to claim 9, wherein said dispersed reinforcing oxide comprises at least one selected from the group consisting of oxides of Group 4A elements, Group 5A elements, Group 3B elements, and Group 4B elements of the Periodic Table of Elements, and wherein the ceramic sheet has a content of silica of 0.1% by mass or less and a total content of alkali metal oxides of 0.1% by mass or less.

11. A process for producing a ceramic sheet by baking a ceramic green sheet comprising the step of:

interposing said green sheet between porous sheets each having a porosity of 15% to 85% in a state that the periphery of said green sheet does not protrude from the porous sheets, and baking said ceramic green sheet with an effective amount of a powder interposed between said porous sheets and said ceramic green sheet, or

placing a porous sheet having a porosity of 15% to 85% onto said green sheet in a state that the periphery of said green sheet does not protrude from the porous sheet, and baking said ceramic green sheet with an effective amount of a powder interposed between said porous sheet and said ceramic green sheet.

12. A process according to claim 11, wherein said powder has an average particle diameter of 0.3 to 100 μm.

13. A process according to claim 11, wherein said powder comprises 50% by mass or more of an organic powder.

14. A process according to claim 11, further comprising the ceramic green sheet molding step, wherein a slurry is molded into the ceramic green sheet, said slurry comprising 2.8 to 4.5% by mole in terms of solid content of yttria and

0.1 to 2% by mass of at least one dispersed reinforcing oxide, and the solid component of said slurry having an average particle diameter (50% by volume diameter) of 0.05 to 0.5 μm, a 90% by volume diameter of 0.5 to 2 μm, and a critical diameter (100% by volume diameter) of 3 μm or less.

15. A process according to claim 14, wherein said dispersed reinforcing oxide comprises at least one selected from the group consisting of oxides of Group 4A elements, Group 5A elements, Group 3B elements, and Group 4B elements of the Periodic Table of Elements, and wherein the ceramic sheet has a content of silica of 0.1% by mass or less and a total content of alkali metal oxides of 0.1% by mass or less.